### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-023852 Address: 333 Burma Road **Date Inspected:** 10-May-2011

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** N/A **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Manoj Prabhune was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

### ZPMC SHIP # 18

This QA Inspector performed photo documentation along with Caltrans QA inspector (Mr.Manjunath Math) on segment lift 12 (East) located on ZPMC ship # 18 prior to being shipped to San Francisco California for erection. The following locations and members documented were as followed:

Lift 12 East (Panel Point 109~111.5) the following sequence of pictures were photographed

## Segment # 12AE

- 1. Intermediate Corner Assembly for cross and vertical truss post bolting area (Cross Beam and Bike Path Side).
- 2. Longitudinal Diaphragm Bike Path Side of segment.
- 3. Longitudinal Diaphragm Crossbeam side of segment.
- 4. Corner Assembly covering overall view, Deck Panel I-stiffeners, Edge Panel I-Stiffeners and Side Cross Beam and Bike path Side.
- 5. OBG overall view, FL3 area overall view, Side view, Front view.

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- 6. Floor Beam- Cross Beam and Bike Path Side facing west and east.
- 7. Lower and Upper Chevron with sea fastening structures of the Cross Beam and Bike Path Side facing west and east.

Ship 18 (Traveler Rails)

Segment 12 East

This Quality Assurance (QA) Inspector witnessed final tension verification for Traveler Rails. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00675 Dated May 10, 2011.

Bolt sizes used were M22 x 120 DHGM220054 and final torque required was 497 N-m. Bolt sizes used were M22 x 160 DHGM200006 and final torque required was 340 N-m.

Manual Torque wrench used was SN. XQ2-114.

Ship 18 (Traveler Rails)

Segment 12 West

This Quality Assurance (QA) Inspector witnessed final tension verification for Traveler Rails. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00676 Dated May 10, 2011.

Bolt sizes used were M22 x 120 DHGM220054 and final torque required was 497 N-m.

Bolt sizes used were M22 x 90 DHGM220048 and final torque required was 500 N-m.

Bolt sizes used were M22 x 110 DHGM220067 and final torque required was 500 N-m.

Bolt sizes used were M22 x 160 DHGM200006 and final torque required was 340 N-m.

Bolt sizes used were M22 x 90 DHGM200042 and final torque required was 287 N-m.

Manual Torque wrench used was SN. XQ2-777.

Unless otherwise noted, all work observed on this date appeared to generally comply with the applicable contract documents.

# **Summary of Conversations:**

No significant conversations were reported on this date.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey - 15000026784, who represents the Office of Structural Materials for

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your project.

**Inspected By:** Prabhune, Manoj Quality Assurance Inspector

**Reviewed By:** QA Reviewer Peterson,Art